

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019303**Date Inspected:** 14-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Tower Lift 4 East

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 4 East. Bolts are installed at Single Diaphragm Flange at elevation 116 meters to block the mis-drilled hole. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00611 Dated January 14, 2011. Inspection was performed at Zhenhua Ship # 18.

Total 10 nos. bolts are installed to block the mis-drilled holes.

The bolt sizes used were M22 x 110 RC Lot # DHGM220067 and final torque required was 500 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Tower Lift 4 West

WELDING INSPECTION REPORT

(Continued Page 2 of 5)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 4 West. Bolts are installed at Single Diaphragm Flange at elevation 116 meters to block the mis-drilled hole. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00611 Dated January 14, 2011. Inspection was performed at Zhenhua Ship # 18.

Total 12 nos. bolts are installed to block the mis-drilled holes.

The bolt sizes used were M22 x 110 RC Lot # DHGM220067 and final torque required was 500 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Tower Lift 4 South

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 4 South. Bolts are installed at Single Diaphragm Flange at elevation 116 meters to block the mis-drilled hole. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00611 Dated January 14, 2011. Inspection was performed at Zhenhua Ship # 18.

Total 4 nos. bolts are installed to block the mis-drilled holes.

The bolt sizes used were M22 x 110 RC Lot # DHGM220067 and final torque required was 500 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Tower Lift 4 North

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Tower Lift 4 North. Bolts are installed at Single Diaphragm Flange at elevation 116 meters to block the mis-drilled hole. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00611 Dated January 14, 2011. Inspection was performed at Zhenhua Ship # 18.

Total 12 nos. bolts are installed to block the mis-drilled holes.

The bolt sizes used were M22 x 110 RC Lot # DHGM220067 and final torque required was 500 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Segment 12BE to Segment 12CE (Transverse Splice weld)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBE12E-003. The welder identification was 044515 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel Transverse Splice

WELDING INSPECTION REPORT

(Continued Page 3 of 5)

weld, Bike Path side.

Please reference the pictures attached for more comprehensive details.

Segment 12BE to Segment 12CE (Transverse Splice weld)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA6502-011. The welder identification was 040367 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel Corner Assembly Transverse Splice weld, Bike Path side.

Segment 12BE (Full Height Diaphragm)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3002N-090. The welder identification was 047353 and was observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-B-T-2232-ESAB. The piece mark was identified as full height Longitudinal Diaphragm web to Bottom Panel hold back weld at work point E3.

Segment 12BE (Edge Panel I-Ribs)

This QA Inspector observed the in-process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as EP3005-001-009/010. The welder identification was 040270 and was observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as Edge Panel I-Ribs, at Bike Path side.

Segment 12CE (Edge Panel I-Ribs)

This QA Inspector observed the in-process fillet welding by Shielded Metal Arc Welding (SMAW) process. The Weld joint was designated as EP3006-001-001/002. The welder identification was 040270 and was observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-P-2114-FCM-1. The piece mark was identified as Edge Panel I-Ribs hold back weld, at Bike Path side.

Segment 12BW to Segment 12CW (Transverse Splice weld)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW12E-002. The welder identification was 049220 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233T-ESAB. The piece mark was identified as the Side Panel, Cross Beam side at transverse splice.

Segment 12BW to Segment 12CW (Transverse Splice weld)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a

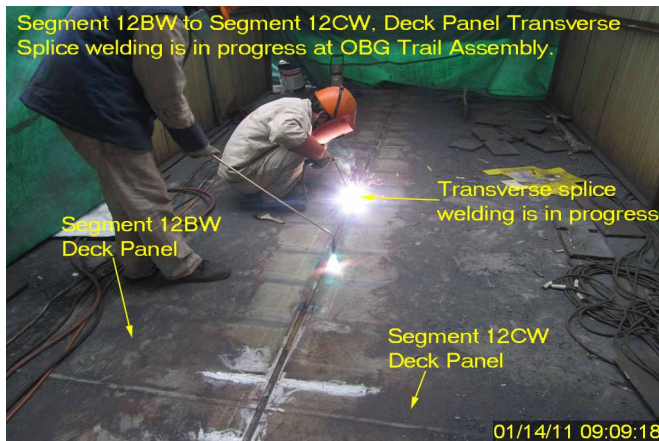
WELDING INSPECTION REPORT

(Continued Page 4 of 5)

Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW12A-001. The welder identification was 251194 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-P-2211-B-U2-FCM-1. The piece mark was identified as the Deck Panel Transverse Splice weld.

Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By: Math,Manjunath

Quality Assurance Inspector

WELDING INSPECTION REPORT

(Continued Page 5 of 5)

Reviewed By: Dsouza,Christopher

QA Reviewer